

Turbo Mohs for Basal Cell Carcinoma Skin Cancer

William V. Stoecker, MD

Stoecker & Associates, 1702 E 10th St., Rolla MO 65401-4600

Email: wvs@mst.edu

Mohs skin cancer surgery is also known as microscopically-controlled surgery because at each stage in the Mohs procedure, a new layer of tissue is obtained surgically and frozen sections made, allowing a microscopic reading of the tissue margins. The Mohs technique, sometimes requiring 3 or more hours because of the pathology determinations, is repeated until the final surgical margins are clear, allowing an overall cure rate exceeding ~97%. Mohs surgery, although more costly than traditional excisional surgery or simple curettage, is often advocated for patients because of the high rate of cure and because it is said to be tissue sparing, requiring no wider margins than the minimal margins needed for tumor clearance. A novel optical technique which would allow skin cancer margin determination is an important goal of the dermatology image research community, because such a technique would eliminate the lengthy and expensive intervening pathology steps, greatly reducing clinic time spent on the procedure, yielding a similar cure rate at a much lower cost.

An Italian research group has reported a cure rate for excisional surgery exceeding 98%. Using a tissue optic phenomenon in dermoscopy called "semitranslucency." Dermoscopic semitranslucency, first described by researchers at S&A and colleagues, has been used in one clinic to determine successful extirpation using curettage. We have confirmed that semitranslucency yields good indication of whether any skin cancer remains. This report describes the use of semitranslucency and the distinction of semitranslucency from two competing structures: white chrysalis structures and sparkling orange structures, visible with cross-polarized light. Plans to further optimize the cross-polarized light source are presented

Keywords: Mohs surgery, semitranslucency, basal cell carcinoma